Operating Instructions

Y-Adapter mini CLIX

> 8593

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2 General Information

2.1 Manufacturer

R. STAHL Schaltgeräte GmbH
Am Bahnhof 30
D-74638 Waldenburg

Telephone: +49 7942 943-0
Fax: +49 7942 943-4333
Internet: www.miniclix.info
www.stahl.de

2.2 Information Regarding the Operating Instructions

ID NO.: 859360300010
Publication Code: S-BA-8593-01-en-10/09/2007

We reserve the right to make technical changes without notice.

2.3 Symbols used

▶	A call to take action: Describes the actions which the user should undertake.
▷	Reaction sign: Describes the results or the reactions to the actions taken.
✗	Checklist sign
☞	Commentary sign: Describes the notes and recommendations.
	Warning sign: Danger due to an explosive atmosphere!

3 General Safety Information

3.1 Safety Instructions for Assembly and Operating Personnel

The operating instructions contain basic safety instructions which are to be observed during installation, operation and maintenance and servicing. Non-observance can lead to persons, plant and the environment being endangered.

⚠ WARNING
Risk due to unauthorised work being performed on the device! ▷ There is a risk of injury and damage to equipment. ▶ Mounting, installation, commissioning and servicing work must only be performed by personnel who are both authorised and suitably trained for this purpose.

⚠ WARNING	
	Danger due to dust deposits! ▷ There is a risk of injury and damage to equipment. ▷ Explosion protection is not guaranteed any longer. ▶ A device with a dust layer exceeding 50 mm as stipulated in EN 50281-1-2 must not be operated.

Before connection/operating:

- ▶ Read through the operating instructions.
- ▶ Give adequate training to the assembly and operating personnel.
- ▶ Ensure that the contents of the operating instructions are fully understood by the personnel in charge.
- ▶ The national installation and assembly regulations (e.g. IEC/EN 60079-14) apply.

When operating the device:

- ▶ The device may only be plugged in or out when subjected to a load of less than a maximum of 250 V AC and 9.5 A rated current.
- ▶ Make the operating instructions available at the installation area (at all times).
- ▶ Observe safety instructions.
- ▶ Observe national, safety and accident prevention regulations.
- ▶ Only operate the device in accordance with its performance data.
- ▶ The Y-Adapter is fully assembled by the manufacturer.
- ▶ No changes to the Y-Adapter are permitted.
- ▶ Repairs that may affect the explosion protection are only to be performed by R. STAHL personnel or a qualified electrician in accordance with relevant national regulations.
- ▶ Servicing/maintenance work or repairs which are not described in the operating instructions must not be performed without prior agreement with the manufacturer.
- ▶ Any damage may render explosion protection null and void.
- ▶ The device may only be used if it is in an undamaged, dry and clean state.
- ▶ The device may only be operated with the associated undamaged connector plugs and sockets.
- ▶ After disconnection, the enrgised plug and socket connection components must be immediately closed off using the protective caps. When replacing the cap, make sure that it covers the connector correctly, otherwise the minimum protection level and the explosion protection cannot be guaranteed.
- ▶ The quality of the connection cable must be chosen, such that it meets the thermal and mechanical requirements in the area of application.

If you have questions:
▶ Contact the manufacturer.

3.2 Warning Information

Warnings are sub-divided in these operating instructions according to the following scheme:

⚠ WARNING
The type and source of the danger! ▷ Possible consequences. ▶ Measures for avoiding the danger.

They are always identified by the signalling word “WARNING“ and sometimes also have a symbol which is specific to the danger involved.

3.3 Conformity to Standards

The Y-Adapter complies with the following standards and directives:

✗ Directive 94/9/EC
✗ DIN EN 60079-0, DIN EN 60079-1, DIN EN 60079-7 and EN 50281-1-2 (comparable international standards: IEC 60079-0, IEC 60079-1, IEC 60079-11)

4 Designated Use

The Y-Adapter is approved for use in hazardous area Zones 1 and 2 as well as Zones 21 and 22. Use in Zone 0 or Zone 20 is not permitted.

The Y-Adapter is used to supply current to movable on-site controllers and electrical systems as well as to movables machines and drives in hazardous areas.

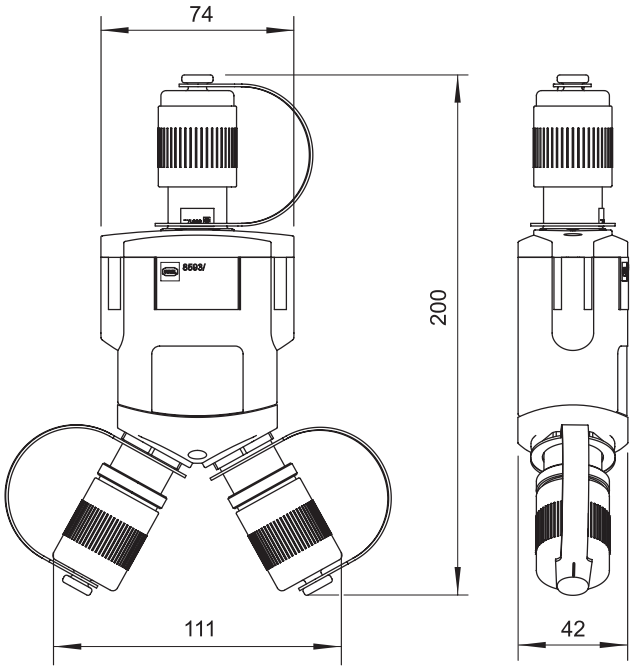
It is used as a quick-action connector of explosion-protected electrical apparatus in intrinsically safe (Ex) and industrial areas.

⚠ WARNING
Only use the device for its intended purpose! ▷ Otherwise, the manufacturer’s liability and warranty expire. ▶ Only use the device under the operating conditions described in the operating instructions. ▶ The device must only be used in areas subject to explosion hazards according to these operating instructions.

5 Technical Data

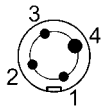
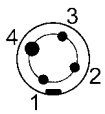
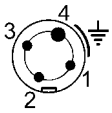
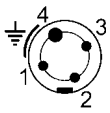
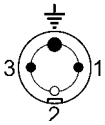
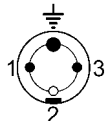
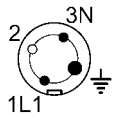
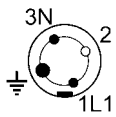
Explosion protection						
Gas explosion protection	⟨Ex⟩ II 2 G Ex de IIC T6 / T5					
Gas explosion protection (IECEx)	Ex de IIC T6 resp. T5					
Dust explosion protection	⟨Ex⟩ II 2 D IP 66 T80 °C / T95 °C					
Dust explosion protection (IECEx)	Ex tD A21 IP66 T 80 °C resp. T 95 °C					
Certificates						
Certificates	PTB 05 ATEX 1071					
IECEx certification	IECEx PTB 06.0094					
Rated values						
AC voltage	250 V					
AC current	9.5 A					
Frequency	50 / 60 Hz					
DC voltage	60 V					
DC current	2.5 A					
Rated values (as functions of ambient temperature)	Max. abient temprature	Ta = 40 °C		Ta = 55 °C		Ta = 75 °C	
	Temperature class	T 6	T 5	T 6	T 5	T 6	T 5
	I_{max}	9.5 A	10 A	6.5 A	6.5 A	2.0 A	2.0 A
Enclosure material	Connection area: Polyamide miniCLIX: Depending on version polyamide, brass nickel-plated, stainless steel AISI 316L						
Ingress Protection	IP 66 / IP 68 (2 m water column, 1 hour) acc. to EN 60529						
Safety class	II - fulfilled by plastic versions acc. to EN 60598						
Ambient temperature	- 20 °C ... + 75 °C (T6; max. 2 A)						
Storage temperature	- 55 °C ... + 80 °C (in original packaging)						
Test torque	Protective caps	2.5 Nm					
	Coupling ring	2.5 Nm					
Weight	mini CLIX in plastic	mini CLIX in metal					
	ca. 270 g	ca. 550 g					

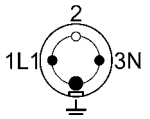
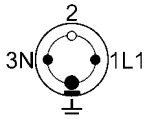
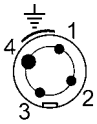
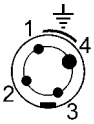
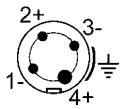
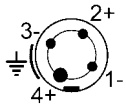
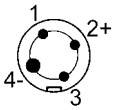
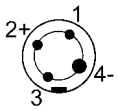
Dimension drawings (all dimensions in mm) - Subject to alterations



11003E00

Proposed coding of connectors
Turn down nose/notch (6 h)
All other codings result out of this position

Voltage	Number of pins	Coding	Couper / Flange socket	Plug / Device plug	Proposed colour coding
Bus	4 P	2 h	 10905E00	 10906E00	green
Bus + Shield	4 P + ⏚*	1 h	 10903E00	 10904E00	without
24 V AC	2 P + ⏚	12 h	 10237E00	 10259E00	without
110 V ... 130 V AC	2 P + ⏚	4 h	 10234E00	 10256E00	yellow

230 V ... 250 V AC	2 P + ⏚	6 h	 10235E00	 10257E00	red
	4 P + ⏚*	10 h	 10236E00	 10258E00	blue
24 V DC	4 P + ⏚*	5 h	 06452E00	 06474E00	green / red
	4 P	8 h	 10238E00	 10260E00	grey

* with PE bracket

All pins/sockets are fitted in the factory, independent of coding.

6 Transport, Storage and Disposal

Transport

▶ Shock-free in its original carton, do not drop, handle carefully.

Storage

▶ Permissible storage temperature in the original packaging: - 55 °C ... + 80 °C
▶ Store in a dry place in its original packaging.
▶ Store Y-Adapter with the protective cap closed.

Disposal

▶ Ensure environmentally friendly disposal of all components according to legal regulations.

7 Commissioning

Before commissioning, make sure that:

- ✗ the checks and tests as stipulated by national regulations were conducted,
- ✗ the correct operation and installation in accordance with the operating instructions and other applicable specifications was checked,
- ✗ damage is checked for each and every time before plug is inserted into a plug/coupler,
- ✗ the same earth potential is present troughout the system when plugging the connectors together.

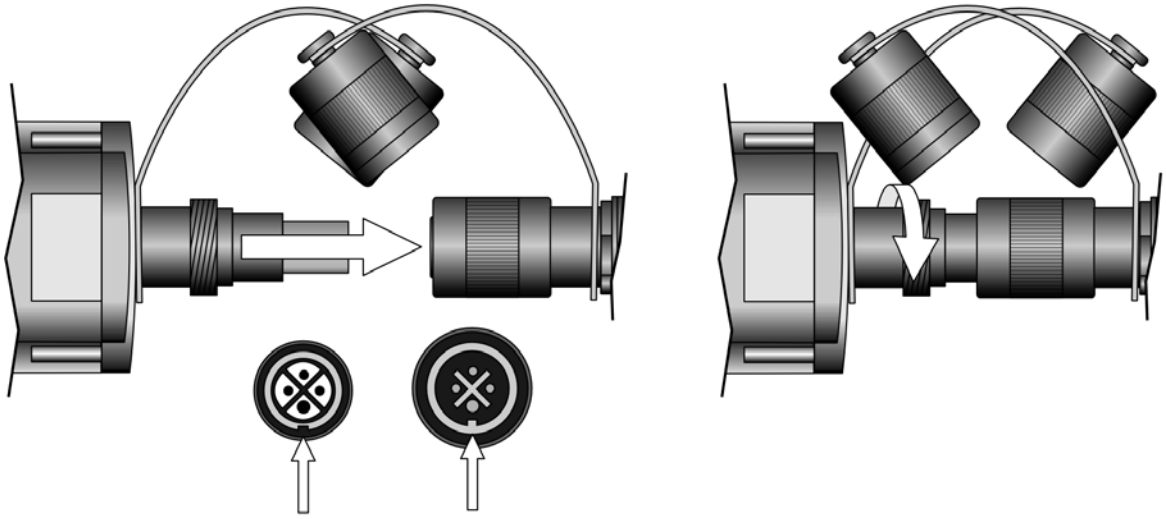
⚠WARNING
Risk of damage to plug or socket! Components must be identically coded.

⚠WARNING	
	Incorrectly connected plug and socket! ▷ Explosion protection cannot be guaranteed any more if the plug and socket are incorrectly connected. ▶ Proceed in strict accordance with the instructions.

7.1 Connecting / disconnecting the plug connection

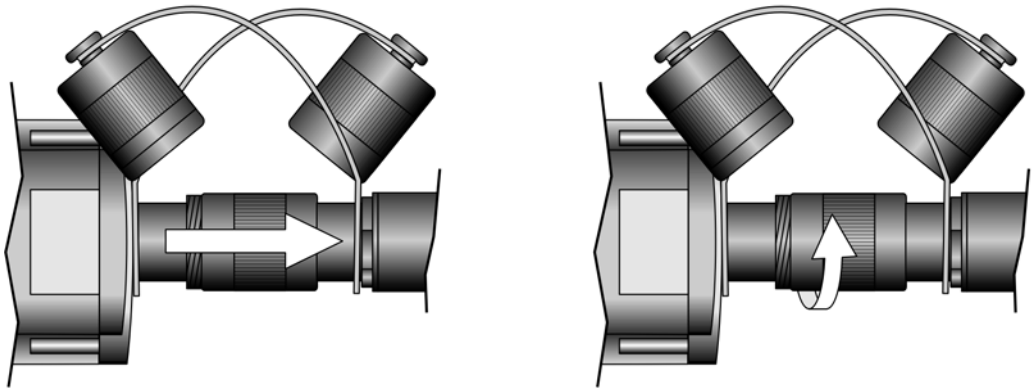
☞	After disconnection, the energised plug and socket connection components must be immediately closed off using the protective caps!

▶ Check the plug for damage.



11046E00

▶ Insert the Y-Adapter up to the first end-stop in the device plug.
When doing this, make sure the guide nose is oriented correctly.
▶ Rotate the Y-Adapter by about 30° to the right until you reach the stop.

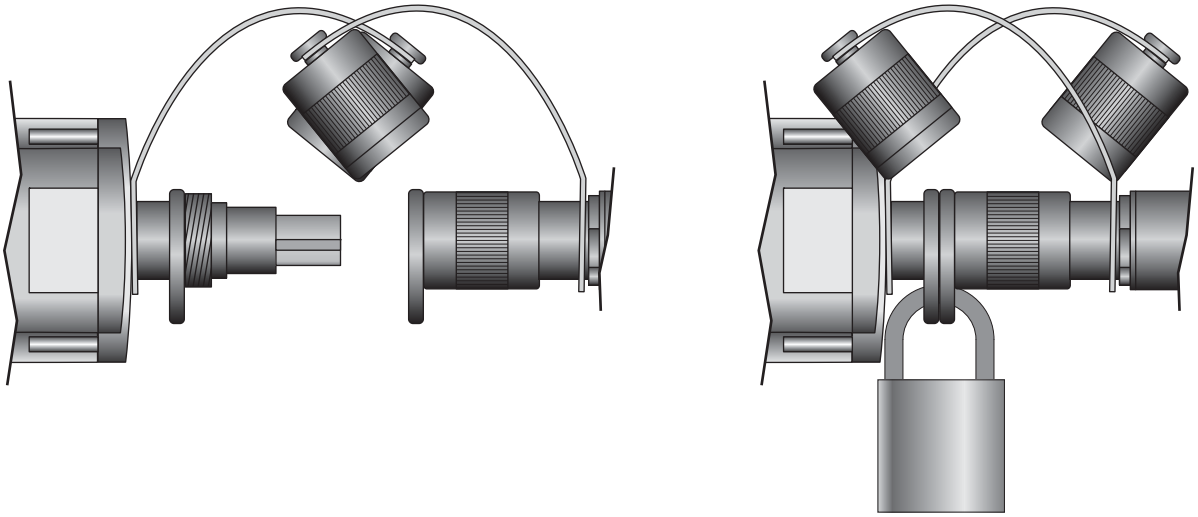


11043E00

▶ Fully insert the plug into the socket.
▶ Screw on the coupling ring/union nut (test torques: see technical data).
▷ The mechanical connection as well as the IP protection are now established.

▶ Disconnection of the plug connection proceeds by reversing the order.

7.2 Locking mechanism



11044E00

The Y-Adapter can be ordered with an optional locking mechanism. It can then be padlock-safeguarded when plugged in (hasp diameter: 3 ... 6 mm).

☞	The union nut must be unscrewed before the connection can be separated.
☞	The locking mechanism can not be retrofitted.

8 Maintenance and Servicing

⚠ WARNING	
	Short circuit in the circuit ▷ After multiple short circuits, the flameproof encapsulation is no longer guaranteed. ▶ After a short circuit, check the functionality of the device. ▶ Replace the entire device if needed.

8.1 Regular Maintenance Work

- ▶ Consult the relevant regulations (e.g. IEC/EN 60079-17) to determine the type and extent of inspections.
- ▶ Plan the intervals so that any defects in the equipment which may be anticipated are promptly detected.

To check as part of the servicing/maintenance schedule:

- ✗ Check that cables and lines are clamped properly.
- ✗ Inspect device for visible damage.
- ✗ Compliance with the permitted temperatures in accordance with EN 60079-0.
- ✗ Make sure the function is in accordance with regulations.

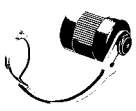
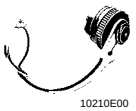
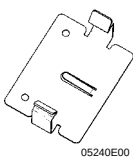
8.2 Repair work

- ▶ Repairs are only to be performed by the manufacturer.
- ▶ No changes to the apparatus are permitted.
- ▶ The device must be returned to the manufacturer for repair.

8.3 Cleaning

- ✗ Clean with a cloth, brush, vacuum cleaner or similar items.
- ✗ When cleaning with a damp cloth use water or mild, non-abrasive, non-scratching cleaning agents.
- ✗ Never use aggressive cleaning agents or solvents.

9 Accessories and Spare Parts

Designation	Illustration	Description	Ordering Code
Protection cap for coupler, Flange socket	 10211E00	plastic (polyamide resin)	4646180
		brass, nickel-plated	4646160
Protection cap for plug, device plug	 10210E00	plastic (polyamide resin)	4646190
		brass, nickel-plated	4646170
Mounting device for wall installation	 05240E00	Stainless steel	859290180010

10 Type Examination Certificate (Page 1)

Physikalisch-Technische Bundesanstalt

Braunschweig und Berlin

(1) **EC-TYPE-EXAMINATION CERTIFICATE**

(Translation)

(2) Equipment and Protective Systems Intended for Use in Potentially Explosive Atmospheres - **Directive 94/9/EC**

(3) EC-type-examination Certificate Number:

PTB 05 ATEX 1071

(4) Equipment: Y-shape distribution box, type 8592/...-..-.... and Y-shape distribution element, type 8593/.-.....-..

(5) Manufacturer: R.STAHL Schaltgeräte GmbH

(6) Address: Am Bahnhof 30, 74638 Waldenburg, Germany

(7) This equipment and any acceptable variation thereto are specified in the schedule to this certificate and the documents therein referred to.

(8) The Physikalisch-Technische Bundesanstalt, notified body No. 0102 in accordance with Article 9 of the Council Directive 94/9/EC of 23 March 1994, certifies that this equipment has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of equipment and protective systems intended for use in potentially explosive atmospheres, given in Annex II to the Directive.

The examination and test results are recorded in the confidential report PTB Ex 05-15174.

(9) Compliance with the Essential Health and Safety Requirements has been assured by compliance with:

EN 60079-0:2004 **EN 60079-7:2003** **EN 50281-1-1:1998**

(10) If the sign "X" is placed after the certificate number, it indicates that the equipment is subject to special conditions for safe use specified in the schedule to this certificate.

(11) This EC-type-examination Certificate relates only to the design, examination and tests of the specified equipment in accordance to the Directive 94/9/EC. Further requirements of the Directive apply to the manufacturing process and supply of this equipment. These are not covered by this certificate.

(12) The marking of the equipment shall include the following:

II 2 G Ex de IIC T6 or T5
II 2 D IP 66 T 80 °C or T 95 °C

Zertifizierungsstelle Explosionsschutz
By order:

Braunschweig,

Dr.-Ing. U. Klausmeyer
Direktor und Professor

sheet 1/2

EC-type-examination Certificates without signature and official stamp shall not be valid. The certificates may be circulated only without alteration. Extracts or alterations are subject to approval by the Physikalisch-Technische Bundesanstalt.
In case of dispute, the German text shall prevail.

Physikalisch-Technische Bundesanstalt • Bundesallee 100 • D-38116 Braunschweig

11 Declaration of Conformity

EG-Konformitätserklärung
EC-Declaration Of Conformity
CE-Déclaration De Conformité

PTB 05 ATEX 1071

Wir (we; nous)

R. STAHL Schaltgeräte GmbH, Am Bahnhof 30, D-74638 Waldenburg (Württ.)

erklären in alleiniger Verantwortung, daß das Produkt	**Y-Verteilerstück Typ 8593/.-.....-..**
hereby declare in our sole responsibility, that the product	Y-distribution element Type 8593/.-.....-..
déclarons de notre seule responsabilité, que le produit	Boîtier de raccordement Y Type 8593/.-.....-..

auf das sich diese Erklärung bezieht, mit der/den folgenden Norm(en) oder normativen Dokumenten übereinstimmt
which is the subject of this declaration, is in conformity with the following standard(s) or normative documents
auquel cette déclaration se rapporte, est conforme aux norme (s) ou aux documents normatifs suivants

Bestimmungen der Richtlinie terms of the directive prescription de la directive	**Titel und/oder Nr. sowie Ausgabedatum der Norm** title and/or No. and date of issue of the standard titre et/ou No. ainsi que date d'émission des normes
94/9/EG: Geräte und Schutzsysteme zur bestimmungsgemäßen Verwendung in explosionsgefährdeten Bereichen 94/9/EC: Equipment and protective systems intended for use in potentially explosive atmospheres 94/9/CE: Appareils et systèmes de protection destinés á être utilisés en atmosphères explosibles	EN 60079-0: 2004 EN 60079-7: 2003 EN 50281-1-1:1998
89/336/EWG: Elektromagnetische Verträglichkeit 89/336/EEC: Electromagnetic compatibility 89/336/CEE: Compatibilité électromagnétique	EN 60529:1991

Waldenburg, 20.04.2006	i.V. B. Limbacher	i.V.
Ort und Datum Place and date Lieu et date	**B. Limbacher** **Leiter Entwicklung** Head of Development Directeur Développement	**Dr. S. Jung** **Leiter Qualitätsmanagement** Head of quality management dept. Chef du dept. assurance de qualité

TÜV 03/99 Papier chlorfrei